CLAIMS

1. An organic electroluminescent device comprising:

a pair of electrodes; and

at least one organic layer between the pair of electrodes, the at least one organic layer including a luminescent layer,

wherein the luminescent layer contains at least one electron injection/transport compound, at least one hole injection/transport compound, and at least one green or blue phosphorescent compound; and the electron injection/transport compound and the hole injection/transport compound each has a minimum triplet exciton energy value which is equal to or more than that of the green or blue phosphorescent compound.

2. The organic electroluminescent device of claim 1, wherein the hole injection/transport compound has an ionization potential of from 5.6 eV to 6.1 eV.

3. The organic electroluminescent device of claim 1, wherein the electron injection/transport compound has an electron affinity of from 2.0 eV to 3.5 eV.

4. The organic electroluminescent device of claim 1, wherein the green or blue phosphorescent compound is a transition metal complex capable of emitting light via a

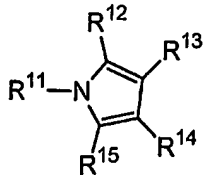
triplet excitation state.

5. The organic electroluminescent device of claim 1, wherein the electron injection/transport compound, the hole injection/transport compound and the green or blue phosphorescent compound each has a T_1 value of 62 kcal/mole or more; and phosphorescence obtained from the green or blue phosphorescent compound has a λmax of not longer than 500 nm.

6. The organic electroluminescent device of claim 1, wherein the hole injection/transport compound is a substituted or unsubstituted pyrrole compound.

7. The organic electroluminescent device of claim 6, wherein the substituted or unsubstituted pyrrole compound is represented by the formula (1):

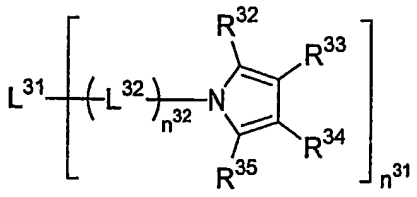
(1)



wherein R^{11} to R^{15} each represents a hydrogen atom or a substituent, and the substituents may be bonded to each other to form a ring structure.

8. The organic electroluminescent device of claim 7, wherein the formula (1) is represented by the formula (3):

(3)

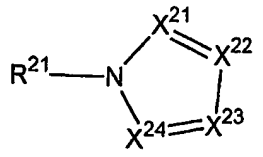


wherein R^{32} to R^{35} each represents a hydrogen atom or a substituent, and the substituents may be bonded to each other to form a ring structure; L^{31} represents a connecting group; L^{32} represents a di- or more valent connecting group; n^{31} represents an integer of 2 or more; and n^{32} represents an integer of from 0 to 6.

9. The organic electroluminescent device of claims 1, wherein the electron injection/transport compound is a heterocyclic compound containing at least two nitrogen atoms.

10. The organic electroluminescent device of claim 9, wherein the heterocyclic compound containing at least two nitrogen atoms is a compound represented by the formula (2):

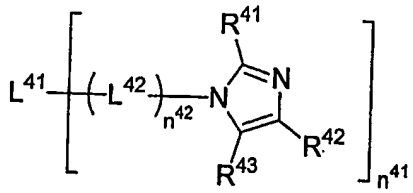
(2)



wherein R^{21} represents a hydrogen atom or a substituent; X^{21}, X^{22}, X^{23}, and X^{24} each represents a nitrogen atom or a substituted or unsubstituted carbon atom; and at least one X^{21}, X^{22}, X^{23}, and X^{24} represents a nitrogen atom.

11. The organic electroluminescent device of claim 10, wherein the formula (2) is represented by the formula (4):

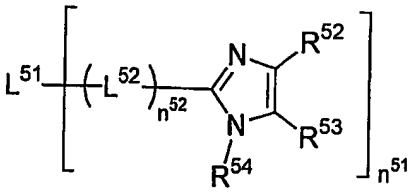
(4)



wherein R^{41}, R^{42}, and R^{43} each represents a hydrogen atom or a substituent; L^{41} represents a connecting group; n^{41} represents an integer of 2 or more; L^{42} represents a di- or more valent connecting group; and n^{42} represents an integer of from 0 to 6.

12. The organic electroluminescent device of claim 10, wherein the formula (2) is represented by the formula (5):

(5)



wherein R^{52}, R^{53}, and R^{54} each represents a hydrogen atom or a substituent; L^{51} represents a connecting group; n^{51} represents an integer of 2 or more; L^{52} represents a di- or more valent connecting group; and n^{52} represents an integer of from 0 to 6.